

Amendments to the Drawings

Replacement sheets for Figs. 1-17 are enclosed which formalize the drawings which were submitted with the application. No other changes have been made.

REMARKS

Replacement sheets for Figs. 1-17 are enclosed herewith which formalize the drawings currently on file. No other changes have been made. Approval by the Examiner is respectfully requested.

Applicants affirm the election of claims 1-15 (Species A) with traverse.

Claims 1-3, 5-10 and 14 were rejected under 35 USC 102(e) as being anticipated by Park et al (US 2003/0218422). Claim 4 was rejected under 35 USC 103(a) as being unpatentable over Park et al '422 as applied to claim 2 above and further in view of Matsuoka (US 2003/0067268). Claims 11-13 were rejected under 35 USC 103(a) as being unpatentable over Park et al '422 as applied to claim 2 above, and further in view of Park et al (US 2002/0155320). Claim 15 was rejected under 35 USC 103(a) as being unpatentable over Park et al '422 as applied to claim 2 above, and further in view of Suzuki et al '217.

Claims 1, 3, 5, 6, 8, 10, 11 and 15 have been cancelled. Applicants have amended claims 2, 12, and 13, and submitted new claims 20 – 36, including new independent claims 20, 25, 26 and 30 to more clearly set forth the inventive features Applicants believe are patentable over the prior art.

Claim 2 has been amended to include the feature of dependent claim 11 wherein the flow-preventing pattern is provided by forming grooves. New claim 20 is similar to amended claim 2 and is directed to the use of a flow-preventing groove pattern in the cover plate to prevent the flow of flowable adhesive material into the electrical interconnect area. Claim 11 (dependent on claim 2) was rejected under 35 USC 103(a) as being unpatentable over Park et al '422 in view of Park et al '320.

Applicants would like to point out to the Examiner that element (c) of amended claim 2 and new claim 20 provide that such flowable adhesive being prevented from flowing or spreading *into* the flow-preventing (groove) pattern. As correctly pointed out by the Examiner, Park et al. '422 does not disclose the use of grooves as flow-preventing patterns. Park et al. '320 discloses a perimeter seal adhesive that is not disposed over the display, but around the edge of the display. This perimeter seal adhesive flows *into* the groove of an encapsulating cover when pressed onto a display substrate. This is a significant difference from the present invention. Applicants have discovered that flowable adhesive over a display area can be prevented from flowing into an electrical interconnect by providing a groove in a

cover plate, not for catching the excess as in Park et al. '320, but to act as a physical barrier that stops flow at the edge of the groove. The adhesive does not spread into the groove and claims 2 and 20 recite this feature. Applicants have discussed (page 21, lines 22-29) some of the properties of the grooves that can enable this behavior.

Referring to the description of Fig. 13A and 13B in the present application, let's assume that adhesive flows into the groove 280K (as taught by Park et al. '320). This could cause the entire interconnect area 328 to become covered with adhesive. In the present invention, the adhesive is prevented from flowing into the flow-preventing groove pattern. Park et al. '320 does not teach or suggest a groove pattern having this function and therefore cannot reasonably be combined with Park et al. '422 to yield the present invention of amended claim 2 or new claim 20. Thus there is no motivation in the cited art for this claimed feature. Thus, independent claims 2 and 20, and the claims that depend on them, are believed to be novel and unobvious.

Claim 25 is directed to an OLED device having a cover plate including a flow-preventing groove pattern on the surface facing the device substrate such that the adhesive is in contact with the display area and the cover plate up to the edge of the grooves of the groove pattern, the grooves of such groove pattern not being in contact with the adhesive. For the same reasons as discussed above with respect to amended claim 2 and new claim 20, it is believed that new claim 25 is also novel and unobvious.

New claim 26 is directed to providing a flow-preventing pattern on a surface of the cover plate or a surface of the OLED devices. The pattern has a closed, rectilinear shape to surround at least the outermost portions of the interconnect areas (see Figs. 8 and 9, and pages 19, line 5-page 20, line 6). Park et al. '422 disclose a closed rectilinear pattern around the display area of the OLED device, not around the interconnect area (see paragraphs [0021] and [0027]). This is a completely different structure from claim 26. There is nothing in Park et al. '422, alone or in combination with the other cited references, that teaches or suggests anything but providing a perimeter seal around the display.

New claim 30 is directed to providing a flow-preventing pattern on a surface of the cover plate or a surface of the OLED devices, and a portion of the pattern is at a position corresponding to positions of the electrical interconnect areas of the OLED devices (see Figs. 3, 5, 7 and 10). Park et al. '422 does not disclose a flow-preventing pattern having an opening. From the figures of Park et al. '422, it is

not clear how their first sealant (flow preventing pattern) is laid out. However, it is clear from the text that it is a closed pattern around the display. Park et al '422 discloses that:

In paragraph [0021]

“The first sealant 410 serves as a barrier for defining the selected organic EL device from the other organic EL devices 300.”

In paragraph [0023]:

“The second sealant 420 fills the space produced by the first sealant 410...”

“The second sealant 420 functions as a hydrophobic liquid layer...”

“The second sealant 420 may be from hydrophobic oils,...”

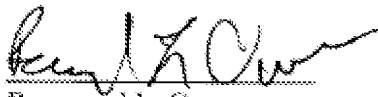
Clearly, then, the first sealant (flow-preventing layer) must be a closed pattern in order to contain the liquid second sealant. Park et al. '422 alone or in combination with the other cited references does not teach or suggest the use of a flow-preventing pattern having an opening.

Matsuoka discloses a prior art OLED device having a seal with an opening (Fig. 2D). However, the seal of Matsuoka is present so that silicon oil can be injected into the OLED device after the sealing cap has been applied. It is not present to allow excess flowable adhesive to escape. Further, there is no disclosure about the location of the electrical interconnects.

It is believed that these changes now make the claims clear and definite and, if there are any problems with these changes, Applicants' attorney would appreciate a telephone call.

In view of the foregoing, it is believed none of the references, taken singly or in combination, disclose the claimed invention. Accordingly, this application is believed to be in condition for allowance, the notice of which is respectfully requested.

Respectfully submitted,



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